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9th November, 1955.

Dear Robley,

Many thanks for your letter. As you probably know, I have now received a splendid collection of heavy atom TMV derivatives from Dr. Fraenkel-Conrat, though not yet the reconstituted virus.

We should be very grateful for ~~your~~ criticism and comments on the enclosed manuscript, from you and anybody else interested. As you will see, it is written rather over-fully in places, because we wanted first to make sure both from you and from Schramm that we have not misunderstood or unduly distorted the experimental work on which it is based.

When I looked through Schramm's collection of electron micrographs I was very impressed by the consistent appearance of 70 A striations on A-protein rods but not on TMV. Have you observed this at all? Or do you believe that this, too, is due to impurity, as you state for TMV (in "Advance" Vol. 2). Another thing which has surprised us is Roger Hart's statement that the short fragments of TMV obtained by ionization do not show a central hole. In Fig. 9 a and b of your 1952 paper the fragments have dark centres. Are these not due to holes?

The central question is, of course, whether the two fragments represented by A-protein monomer and the doughnuts (should we use this word, or remove it before publication?) are sufficiently uniform in size to justify our speculating about their origin. Schramm is clearly convinced that they are, and I find his papers fairly convincing, but I should be interested to know what you think about this.

Do you know whether anybody has studied light-scattering by A-protein monomer? It might just be possible to distinguish, by this means, between a molecule of the form we suggest

P.T.O.

and one in which the three X-ray units are side by side.  
The latter would be a flat, thin molecule.

Best wishes,

Yours sincerely,

Rosalind Franklin.